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**The third Pre-Convention Session on School Health, sponsored by the Department of Health Education of the American Medical Association and the American School Health Association, will be held on June 25, 1961 in New York City. Topics for discussion will concern physicians, school health personnel, and public health personnel. The meeting will begin at 7:00 p.m., Sunday, June 25, at the Park Sheraton Hotel, 870 Seventh Avenue.**

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THE AMERICAN SCHOOL HEALTH ASSOCIATION

## AMERICAN SCHOOL HEALTH ASSOCIATION

Organized 1927

*Devoted to the interests and advancement of those engaged in school health activities and the service rendered by them*

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THE JOURNAL OF SCHOOL HEALTH

*Devoted to the interests and advancement of school health service and instruction. Your participation by membership is solicited.*

Vol. XXXI May, 1961 No. 5

## THE PRESIDENT'S PAGE

### ASHA Believes in Teamwork

CLAIR E. TURNER, Dr.P.H.

*President, American School Health Association 1942–3*

Webster defines teamwork as "work done by a number of associates, usually each doing a clearly defined portion, but all subordinating personal prominence to the efficiency of the whole."

In this the American School Health Association has a proud, consistent and continuing record. This Association has, to a remarkable degree, looked at the job to be done and sought to bring together a team to do it. It has never believed that Me First Street is the road to success in serving the child.

Most of you were not at the APHA meeting in Cincinnati in 1927 when the Association came into being, so perhaps you will forgive a personal reference. John Sundwall came to me and said, "Clair, we are organizing an American Association of School Physicians. You know the APHA turned down our request for a school health section last year and we believe a place is needed for the consideration of school health problems." (The APHA has since adopted a very generous policy toward the establishment of sections in the various areas of public health. But in 1926 the Governing Board appears to have felt that the Child Health Section could accomodate school health and was not ready to create a school health section).

And John went on to say, significantly, "The membership is now restricted to physicians but I feel sure that other school health workers will soon be admitted." And they were. In 1936 the Association changed its name from the American Association of School Physicians to the American School Health Association and the School Physicians Bulletin became the Journal of School Health. And the membership was broadened.

Thus teamwork was in the minds of our founders from the beginning. In 1942 the Association elected its first non-medical president, who, like every other president of the Association I am sure, found working with our cooperative group one of the happiest experiences of his professional career. Now rotation of the presidency among the different professions has become standard procedure.

We have promoted teamwork not only within the Association and within the school but also within the community. We have had various committees dealing with the relationship and coordination of school health education with community health education. We have recognized that only part of the health experiences of the child occur at school and

that many more occur at home and in the community. We have recognized that the solution of a health problem like polio vaccination, the elimination of poison oak or the eradication of hookworm demands the cooperative effort of schools, health departments, voluntary agencies, medical societies and other groups.

The Association has always been ready for teamwork with other organizations. It has had close relations with APHA. It has had representation from AAHPER in its planning groups. It has been a member of the National Council for Cooperation in Health Education from its beginning. It has from the first participated in the work of the International Union for Health Education and its American branch, the American National Council for Health Education of the Public, furnishing significant committee reports for the international meetings of the Union.

In 1962 the International Union will meet in Philadelphia, June 30 to July 7. The planning for this International Conference on Health and Health Education has already had and is continuing to have the participation of ASHA, as will the meeting itself. The conference is being cosponsored by the World Health Organization. It will bring together leaders in public health and health education from every continent to consider the world's most important health problems and the contribution which health education in home, school, community, college and industry can make toward their solution. Participation will come from school health as well as from public health, from voluntary as well as from official agencies.

As we look back we can be proud of the broad, unselfish, cooperative spirit of this Association. As we look ahead we see a need for that spirit in the promotion of child health around the world and also as an international cement of common interest in the child whatever the race or clime.

Let us build further upon the spirit and utilization of teamwork in the school, in the community, in the nation and in international relations.

* * * * *

## WHAT CAUSES EPILEPSY?

S. George Santayana, M.D., Ph.D.
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Epilepsy is a malady characterized by periodic seizures. In the convulsive attacks of epilepsy, there is usually loss of consciousness, and the period is from five to twenty minutes. They vary greatly in frequency and severity; the severe form being known as grand mal, while the mild form, in which dizziness occurs instead of convulsions and loss of consciousness, is called petit mal.

There is no particular class of people in which epilepsy may not occur. It has afflicted pauper and plutocrat, the humble and the proud, the dullard and the genius. Julius Caesar, greatest ruler of Rome, was an epileptic. Napoleon also showed unmistakable symptoms of epilepsy. Mohammed, founder of a vast religion, Lord Byron, one of the foremost

poets, and Dostoyevsky and Flaubert, world famous novelists, were epileptics, as were Handel, Mendelssohn, Mozart and Paganini, composers whose names will be known as long as humanity exists. Peter the Great, Charles V and Balzac were known to have been sufferers from epilepsy during their childhood. There are very few regions in the world where epilepsy may not be found. The Maoris (South Sea Islanders) constitute perhaps the only exception, although among certain tribes of American Indians and the natives of Hawaii and the Phillippines the disease is very rare. In the United States, however, basing the incidence among 2,500,000 drafted men as applicable to the entire population, it is estimated that there are about one half million people suffering from epilepsy. Persons should not feel, therefore, that because they may suffer from occasional attacks of convulsions, unconsciousness, or other symptoms of epilepsy, that they are afflicted with a condition which is especially rare or unusual. On the other hand, they should not lull themselves into a sense of false security by underestimating the seriousness of the condition. Remember that while there still remains a great deal to learn about epilepsy, there is, nevertheless, a great deal to be said respecting prevention and correction of the symptoms of this condition that was entirely unknown years ago.

Epilepsy has advanced from a disease of superstition and mystery to one that is recognized by medicine and psychology as a visible evidence of an electric storm within the brain. Great strides have been made in the last half century toward the recognition, cause, and treatment of this disease. Many believe that epilepsy will be greatly increased in the future and, if this is so, medical science and psychology must advance more rapidly to keep up with the increasing demands.

> Because the seizure is made up of different symptoms which are present in varying degrees, the forms which seizure may take are almost infinite. The main elements are, first and most important, impairment or loss of consciousness; second, involuntary muscle movements; third, abnormal sensations; and fourth, psychic (mental) disturbance. Doctors have divided seizures into three groups, depending on which of these elements predominates. In petit mal impairment of consciousness predominates; in grand mal involuntary muscle movement; and in psychic seizures peculiar behavior. These three divisions have been recognized for generations, but in the last few years research workers have found that if a record is made of the electrical waves coming from the brain during a seizure, each of these three types has its own pattern of electrical activity.[1]

Approximately one half of the patients have warnings before a seizure. This sensation usually comes but an instant before consciousness is lost. Some have just a "queer feeling," others "dizziness," "numbness," "sickness," or "fear." This is usually part of the seizure. This warning sensation is important to the examiner because it may tell him in what part of the brain the attack begins. This information is particularly valuable when it is an abnormal sensation such as movement in the hand

[1]Lennox, W. G., *Science And Seizures*, Harper, New York, 1941, p. 24.

or foot or experiencing tastes, smells or sights which are not actually present (hallucinations).

Petit mal is the most frequent and distinctive of the seizures of epilepsy. They may be present long before a convulsion occurs, but symptoms are often so slight that they are overlooked. There is no warning; the seizure consists of loss or impairment of consciousness which comes abruptly and lasts a few seconds only. There is seldom any twitching and the patient rarely falls and many continue in what they are doing at the time. Consciousness is regained abruptly and fully without unpleasant after symptoms. The patient usually knows that an attack has occurred. These attacks are more prominent in adolescence and they occur more frequently than grand mal attacks, sometimes five, fifty or several hundred times every day. When alone these attacks seldom cause any mental impairment. A convulsive attack which is mild, or of short duration, should not be called petit mal.

There is usually a warning preceding the grand mal attack. After this there is complete loss of consciousness and nearly simultaneously a spasm or tightening of all the muscles. Muscles may not tighten equally or simultaneously. The patient falls and with continued spasm of the muscles of respiration his breathing stops and his color becomes dusky and saliva flows from between his lips. After what seems like minutes to the onlooker but is usually only a fraction of a minute, the rigid state of the muscles changes to jerking movements. The arms, legs and head jerk violently but air begins to enter the lungs and the color clears. After a minute or so the jerking movements become slower and finally stop, and the patient lies relaxed, breathing heavily, sweating profusely, and insensitive to pain. After becoming quiet he may sleep heavily and for hours. A severe convulsion may be followed by headaches, vomiting, or soreness of the muscles. There is no such thing as "typical epilepsy." Every person has a different combination of actions. Convulsion usually comes singly, but sometimes in twos or threes; they may occur while the person is asleep.

The Jacksonian form is called a subspecies of grand mal, because usually in this form the patient does not lose consciousness but a convulsion is confined to a certain area of the body. If it spreads through the whole body it becomes grand mal. The Jacksonian form is important because it indicates that attacks originate in a certain part of the brain.

> The condition for the production of this reaction is a sudden unexpected application of stimulus, which need not necessarily be strong. The slamming of a door, a friendly slap on the shoulders from behind, a flash of lightning, the sight of a repugnant animal, the prick of a pin—almost any stimulus suddenly and unexpectedly applied causes the susceptible person to bound into a state of muscular rigidity.[2]

The appearance and actions of a person in a psychic seizure is hard to describe because there are more types than in the grand mal. Instead of completely losing consciousness and control of himself the patient is

[2]Rosett, J. "Synthetic Conceptions in Neuro-psychology: Epileptic Seizures", *Scientific Monthly*, Nov. 1941.

in a state of amnesia. He acts as though he were conscious but afterwards has no memory of what took place. Usually the attacks last only a few minutes but they may go on for hours or even days. The person acts as though he were intoxicated except that he is never hilarious, but instead is morose and irritable and may become ugly and violent if forcibly restrained.

> In atoxic or "contortion" spasm, the patient becomes unconscious, his arms and legs may stiffen, or if sitting his body may twist, he may clamp his jaws, perhaps drool a little and become dusky in the face. He may not fall, even if standing, and there is never the violent, rhythmic, jerking movements on the grand mal.

Some psychic seizures show themselves by altered disposition; this patient becomes antisocial and cannot account for it because it is foreign to his disposition. Some "behavior problem" children may be of this type. The borderline between psychic seizures and other disorders of the mind is not sharply drawn.

A person may have only one or he may have two or even three types of seizures. Psychic seizures are more common among males while petit mal is more common among females. About two thirds of the patients with petit mal usually develop grand mal later. Petit mal seizures occur most frequently, and as a rule after adolescence these attacks become less frequent. Some may outgrow seizures while many become worse.

In seizures the final reaction is much the same in all patients but the train of events leading up to the final reaction are of an infinite number. This is why there is no reasonable answer to the question, "What is the cause of epilepsy?"

The fundamental cause is the inherent tendency or the predisposition to seizures, but why? In the last few years research workers have demonstrated that a predisposition to seizures or related conditions can be visualized by means of records made of the electrical waves of the brain.

Brain wave patterns characteristic of epilepsy were found in over half of a group of parents of epileptics. Abnormal brain wave patterns were seen ten times oftener among the parents of the epileptics than among members of the control group who were not closely related to an epileptic. In ninety-two per cent of the families on which records were obtained of both parents, at least one of the parents had a definitely abnormal brain wave record.[3]

However, many are carriers but of this number probably very few will develop seizures unless one or more of the other causes of seizures are present. Of twenty persons predisposed to epilepsy only one ever has seizures.

The most serious contributing cause is a congenital defect or a failure of the brain to grow normally. Infections which settle in the brain or its coverings may leave scars which then or later in life help to produce seizures: meningitis, abscess of the brain, encephalitis and syphilis are

[3] "Brain Waves Show Tendency to Epilepsy is Inherited." *Science News Letters*. XXXV (May 20, 1939), 315.

all causative factors. Severe injuries of the brain, blood clots and tumors, when present, are important.

Abnormalities present in the rest of the body are much less important and affect the brain only secondarily. Diseases of the kidney, endocrine deficiency or over-functioning of the ductless glands, hardening of the arteries may cause seizures. In many, seizures begin at puberty and about one third of the women epileptics tend to have more seizures when they are physically debilitated.

Many patients will have seizures immediately after some unpleasant or terrifying experience, or may have an increase of seizures during periods of unhappiness or worry. Chronic alcoholism is a frequent cause. Lead poisoning, suffered chiefly by painters and similar tradesmen, have been known occasionally to produce epilepsy. Reflex epilepsy, comparatively rare, may be due to intestinal disorders or worms, adherent prepuce in boys and hooded clitoris in girls, contraction of the aperture of the vagina, carious teeth, diseases of the eye and ear, and obstructions of the nasal passages.

> The presence of one of these diseases does not prove that it was the sole cause of the seizures. If a gunshot wound of the brain were in itself enough to cause epilepsy, then seizures should occur in 100% of those wounded, in place of the actual 5 to 10%. Probably those who have seizures as a complication of some injury or illness already had a predisposition to epilepsy, but actual epilepsy would never have occurred if the injury or illness had not intervened.[4]

Seizures in infancy or childhood are much more common later in life. This is due first to the fact that hereditary traits tend to show themselves early; second, to the frequency of injuries at birth; and third, to the manner in which the nervous system develops. Pediatricians have a saying that a convulsion at the onset of fever in a child corresponds to a chill in an adult. A child may have only one convulsion. A single petit mal, or psychic seizure, would probably not be recognized. The contributing causes of seizures in infancy or childhood may be quite different from those of later life.

The person who has seizures has long been looked upon as inferior or peculiar. In spite of the appearance of a person during a convulsion, he rarely dies of it. Many connect epilepsy with mental impairment and think that it is a companion to seizures. Because of these feelings many suffer and become social outcasts. And when seeking treatment they are ready to do anything just so they will be cured. The three main types of therapy advocated today are psychological—social, physical and pharmacological.

The greatest danger upon recognition of the disease is excessive fear, shame, and humiliation. Because of this fear and humiliation many assume an attitude of hopelessness and isolate themselves from society. This inactivity and despondency gradually develops into a case closely related to mental deterioration. The possibility of helping a person overcome this feeling or dread is often neglected. In fact, many families are

[4]Cf. Lennox, *op. cit.*, pp. 72–73.

instrumental in furthering this attitude taken by the person affected slowly. If the members of the family can look upon the person as they would on any other physical disability, gradually others will adopt the same attitude. People in contact with one who has seizures should know of his condition, but otherwise it should not be made public. Education and employment are aids in treating epilepsy because they form a goal to be attained and they give the person a feeling of self-dependency. It has been shown that seizures are less frequent when the mind is occupied, and abnormal brain waves tend to become more normal when the mind is at work. Epileptic children of school age should be kept in school if their health is to be unimpaired.

* * * * *

## RECENT TRENDS IN SCHOOL HEALTH EDUCATION*

CATHERINE VAVRA, R.N., M.P.H., FASHA
*Health Educator, Medical School, University of Washington*

The two words "health" and "education" immediately bring to mind two very different fields of study. When put together, however, as "health education" they point up the need for collaboration between educators—teachers, school administrators, etc., and the health scientists—the physicians, dentists, researchers, if we are to close the gap between what is *known* about maintaining health or preventing illness and what is actually practiced by all of us, and the children in school and their families.

We cannot hope to know both fields completely as teachers but there are some activities taking place that are helping teachers to be better informed and up-to-date on health research, on the health needs of children, on the health problems in communities and on the educational methods most effective in solving them.

When we use the term "health education" in reference to school programs, we include the total school health program as it affects the child. First, this means the health services provided by professional health personnel—the nurses, doctors, dentists, dental hygienists, sanitarians, and others. Secondly, healthful school living includes the total physical, mental and social environment of the school starting with the health department's approval of new school plans, the site chosen for suitable drainage, a safe street free from heavy traffic, and the many more aspects of the physical environment we all recognize as important—the lighting, seating, drinking fountains, toilets, upkeep of the building, lunchroom facilities, food handling and storage, planning for the total school day, the emotional tone in the classroom and the relationship of the children to the teacher.

The third phase of the health education program is that of health instruction in the classroom, and individual guidance by nurses, teachers and others. The health services and healthful school living provide opportunities for health instruction which cannot be overlooked.

*Presented at the Ventura, California School Health Workshop—August 5, 1960. Sponsored by San Fernando State College.

## TRENDS

The following trends are a few that seem to be the most significant.

I. *Greater Emphasis on the Preparation of All Teachers For Their Health Education Responsibilities.* (3)

Courses in school health are *offered* in almost all colleges preparing teachers and are *required* in an increasing number. It is recognized that prospective teachers need experiences and training to increase their sensitivity to deviations from normal health and the factors that influence the health of the children in their classrooms. During practice teaching the student teacher should have opportunities to teach health as well as to learn about the health service program in the school.

Evidence of this interest in teacher preparation is the statewide conferences that have been held for college representatives to discuss the best ways to introduce such course content and provide the necessary experiences. Such conferences have been held in Michigan, Washington, and New Mexico and others are being planned.

Action has also been taken on the international level through the World Health Organization and the United Nations Educational, Scientific, and Cultural Organization in the production of the Discussion Guide on Teacher Preparation for Health Education in 1957. Its worldwide distribution to Ministries of Education and Health in three languages of Spanish, French and English encouraged its reproduction in native languages for local use. (11)

The WHO and UNESCO also sponsored an Expert Committee meeting last fall in Geneva to make recommendations regarding teacher preparation. The report of this representative group has just been made available from the WHO. (13)

The national professional organizations such as the AAHPER, ASHA, ACHA have held meetings or devoted sessions to the topic of teacher preparation. The American School Health Association has a committee which assembled recommendations for the preparation of all teachers as well as for specialists in health education. (3) The American Association of Health, Physical Education and Recreation collaborated with the United States Public Health Service on a conference for college teachers on the research being carried on by the National Institutes of Health in Washington, D. C. in June of this year. (1)

II. *Increasing Coordination Between School and Community Health Department Staffs and Among the School Staff Members Within Schools*

Teachers and health department health educators and other staff members are working more closely together on real health problems that require joint effort for solution—for example, polio immunizations. In one city, the school health coordinator and the health department health educator collaborated on all details of the educational program pertaining to the field trials of a new oral vaccine.

There are many other community health problems which demand

understanding by *all* citizens if the best solution is to be found such as air and water pollution, alcoholism, radiation hazards, the population explosion resulting in urban sprawl, insecticides, dental health and fluoridation of water supplies, cost of medical care and prepayment plans, and so forth.

This workshop is an example of joint effort by schools, community, voluntary health agencies, and public health agencies all working together for the improvement of the health teaching in schools. Public health personnel recognize the important contribution made by teachers in allaying fears and counteracting misconceptions about new preventive measures in health such as the use of fluorides for increasing the resistance of tooth enamel against the acids of dental decay.

But the teachers must have up-to-date information and the conviction to teach what is scientifically sound. Health committees in a school or in the school system are becoming more common. These are leading the way to improved programs based on the specific needs of the particular situation.

III. *Increasing Participation of Physicians and Dentists in Private Practice*

Private physicians and dentists and their state associations are taking more interest in school health programs as evidenced by two state-wide meetings held in California, nine regional and four sectional conferences. Next fall they plan to sponsor a small working conference on "teacher health." The Northern California Pediatric Association is in the process of developing a form for medical examinations of school children. (4)

Senior medical students at the University of Washington are receiving orientation to school health programs and are visiting schools to see how such programs are carried out. They are also visiting classrooms to see how teachers work with children at different grade levels. These efforts are directed toward developing an understanding of the total school program so that doctors will be more helpful when their advice is needed on children's health problems.

The Southern California Dental Health Association has employed a dental health educator to further the educational program regarding dental health.

IV. *Increased Interest in School Health by School Administrators, Teachers, Nurses and Parents*

Conferences for school administrators on the school health program have been held in various parts of the United States. The school administrator is in the strategic position to encourage teachers and others to develop the best program possible for his school.

There is *increased emphasis* on a *planned health instruction* program *on all levels* resulting in *more courses of study* and *guides being built* by curriculum committees in schools, more conferences devoted to developing curriculum materials, more curriculum consultants in health education available to teachers and curriculum committees. These efforts are directed at planning for health instruction that will not be repetitious year after year or on the other hand omit essential learnings for children as they progress through school.

V. *More Studies in School Health Education Giving Directions Regarding the Most Effective Methods to Use in Classrooms*

School health evaluative studies such as the five year program in the Los Angeles area are bringing forth new appraisal instruments or the modification of earlier ones to determine the effectiveness of various aspects of the total school health program. (6) Probably the most valuable result of the studies was the individual growth of the personnel involved and the importance of the *team approach* to appraising the health program.

All of the schools involved worked on the aspect of their program that seemed the most important to them at the time. For example, one school appraised the health instruction part of the program through instruments designed to determine changes in behavior, attitudes and practices. These brought out the strengths as well as the weaknesses in the instructional program. It was generally found that there was a relative strength in knowledges and attitudes and less strength in practices. This brought out the great gap between *knowing* and *doing*.

One school system which appraised its total school health program came out with very definite recommendations for its high school health education program that

1. Instruction concerning alcohol and narcotics be intensified.
2. That a more intensive approach be made to mental health education.
3. That there be increased emphasis upon family life education.
4. That there be direct instruction in appropriate subject fields regarding investigation before purchasing products, and the use of scientific facts to make decisions.

There were others pertaining to identifying health needs of a community and suggestions pertaining to obtaining corrections of defects found in the health service program. (10)

The effectiveness of the use of television in teaching large classes of freshman health education is being studied at The Ohio State University. The use of student guides and small discussion groups is being evaluated. Many other uses are being made of television such as closed circuit instruction on dental health, or educational television for in-service education of teachers demonstating classroom experiments useful in high school science and health classes. Home nursing classes have been taught on television and have been found to be equally as effective as regular classes except for some skills.

A study was made to evaluate three different *patterns of health instruction*: correlation, integration, and a separate course *for high school students*. (6) Evidence from this study supports the conclusion that *best results* in health instruction can be achieved by *direct teaching* in a *daily course meeting for two semesters in high school.*

The American Cancer Society has reported on experiments in how to modify the smoking behavior of high school students. (14) During the interval the epidemiological problem changed from "Does smoking *cause* lung cancer?" to "What is the *mechanism* whereby cigarette smoking *causes* lung cancer?" And the educational problem changed from "*Shall*

we tell them?" to "*What* shall we tell them?" and "*How* shall we tell them?"

The study included a questionnaire on smoking habits and personal background, administered to all high school students in eleven public high schools and five Catholic parochial high schools in Portland, and five high schools in two counties outside the city limits but part of the urban area. Six experimental groups were set up, one of which served as the control. The effects of five different educational approaches were analyzed.

1. The remote—Emphasis on those aspects of smoking to lung cancer especially in later life.
2. Contemporary—Emphasis on those aspects of smoking having current meaning to high school students.
3. Both-sided—Designed to give both sides of the question so this was somewhat permissive in regard to smoking.
4. Authoritative—Smoking is sometimes an act of rebellion against authority so the appeals to authority were tested.
5. Adult role-taking—Since smoking is a symbol of "growing up," this approach was designed to let the high school student reverse the usual parent-child roles and become the person who provides information on health.

The result was that the "*remote*" approach was *most effective* with both boys and girls. Actually this was a surprising result. The "contemporary" approach was as effective with girls but not with boys. The "both-sided" was fairly effective with both groups.

The "remote" approach seems to be working with teaching about alcoholism also as more patients are going to alcohol information centers earlier for advice.

VI. *Studies By Behavioral Scientists Are Emphasizing the Importance of Motivation and Communication on Learning*

The research of the social scientists has many implications for us in health education as summarized by Ralph Tyler, Director, Center for Advanced Study in the Behavioral Sciences—Stanford. (11)

Tyler points out that values developed by the individual *over time* appear to exert a much greater direction to human behavior than the more easily manipulated biological drives.

*What* an individual *values* serves as a focus of attention and effort much more powerfully than exhortation of parents and teachers or the *rules* and *directives* of the *school*.

These values are acquired from the family and social groups to which he belongs, from the adults whom he admires and with whom he identifies, and from the peer culture of the school. When these values are consistent with the goals and activities of a program of health education, they are a strong reinforcement for the program, but when they are in conflict, learning is limited. For example: Cigarette smoking is more frequent if parents smoke. Smoking is high among the group that has not achieved satisfaction from its peer group relationships (a minority in the school population, however)—but accounts for 25% of smokers. (5)

The Portland study also emphasized the fact that mature adults seek

long-range goals and are able to postpone immediate rewards. Teachers of elementary children recognize that young children are more concerned with immediate results. The health teacher has two responsibilities in this connection: one is to devise programs which *utilize constructively* the kinds of motivation his pupils *have already* developed and the other is to help pupils develop more effective long range motivations.

> Example: In the Portland research, Daniel Horn and his associates found the "remote" approach was most effective with boys and girls who smoked in emulation of their parents and less so for the more emotionally tinged reasons for smoking of compensation or rebelion against authority.

The "remote" approach was essentially one of saying "We have *new* facts not known before that have led to the conclusion that the smoking of cigarettes can cause lung cancer. Think about it *before you decide* to smoke." (5)

The research in motivation by Rosenstock suggests three major principles to guide us in our educational effort. (9)

a. Preventive or therapeutic behavior regarding a health problem is determined by the extent to which a person sees a problem as having serious consequences to him.
b. The individual must recognize the probability of occurrence to him.
c. Behavior is determined by the extent to which he believes a course of action is open to him to reduce the threat of illness.

For example, many people don't get an X-ray because they don't think tuberculosis can happen to them. Or they don't think they can afford the cost of treatment so they stay away until a suitable explanation is made to them to convince them that they will not have to sell their home to have proper care, etc.

Small groups, such as the family, the gang, the friendship group, influence the individual profoundly. If we are to bring about change in behavior or attitudes, we must work *with* the small groups that have most influence on the child—his pals, his family, his gang. (11)

The above brief illustrations of recent efforts in evaluation in health education and the research in motivation by the social scientists, are giving us directions to the approaches we need to take if we are to bring about desirable changes in health behavior and to close the gap between what we know about the prevention of illness and the maintenance of health and what we actually practice.

### *Conclusion*

The present trends in school health education described indicate a definite movement toward increased emphasis on teacher preparation for health education, a recognition of the health implications of the total school program and increased research into the most effective educational approaches to the improvement of health practices of children and youth.

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• In order to make constructive printed materials on epilepsy accessible to health personnel without charge, the National Epilepsy League has reprinted the May, 1960, issue of their newspaper, HORIZON. This special issue contains the equivalent of a 50–60 page booklet covering both medical and educational aspects of epilepsy. It is designed to satisfy basic informational needs on epilepsy in the belief that truth banishes fear and superstition. George Nelson Wright, Ph.D., and Frederic A. Gibbs, M.D., served as the writer and medical editor, respectively.

School health educators are invited to order copies of the issue from the National Epilepsy League, 208 North Wells Street, Chicago 6, Illinois. You will find this unique publication of real value and interest.

• The follow-up of the 1960 White House Conference on Children and Youth by the Kansas State Board of Health was a series of seven one-day workshops for the high school students of the state. Over 1000 young people and adults attended one of these sessions in which priorities listed by the youth delegates to the Conference were highlighted and discussed. A report of this project may be obtained from Miss May Hare, Director of Workshops, Kansas State Board of Health, Topeka.

• The New York State Dental Hygiene Teachers Association, an affiliate of the A.S.H.A., recently held their annual meeting in Syracuse, New York. A series of Dental Hygiene Clinics were held.

Ann Kotsubo was elected President; Lonlyn Stellar, President-Elect; and Lenore Connell, secretary. Mrs. Mary Hutton is the representative on our National Governing Council.

# VOCATIONAL GUIDANCE TOWARD HEALTH CAREERS

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Where to find the people to provide essential health services is a matter of increasing concern, as health manpower shortages continue at critical levels. During the past six years, efforts to attract young people toward careers in health have been guided to a considerable degree by the National Health Council's Health Careers Program and the Commission on Health Careers. The guides they have proposed point out that planning for local health career activities should involve both the schools and the health agencies, sharing the common concern for health careers for young people. Almost without exception, reports of local programs show that they have at some stage of planning involved school vocational guidance counselors.

Unfortunately, most of us in health have a rather vague notion, left over from our own high school days, of what a vocational guidance counselor's job is really like. Thus we may have been disturbed to discover that our interests as health people are not always paralleled to the degree we deem desirable by the interests and activities of the school guidance people.

Yet the cooperation of school guidance counselors is essential to success in influencing young people toward careers in health, because mere dissemination of information about such careers is not enough. Just as there are optimum "teachable moments" when people are most receptive toward general and specific health education, so are there peaks of receptivity toward vocational selection. One of these peak periods is during adolescence, when the vocational guidance counselor is in a strategic position to work with youngsters and their parents in career choice.

To acquaint health workers more intimately with the theory and practice of vocational guidance counseling as it relates to health careers, the National Health Council's third annual meeting on Health Manpower Shortages, held during the Eighty-Seventh Annual Meeting of the American Public Health Association in Atlantic City in October, 1959, reviewed the theory and practice of vocational guidance counseling in secondary schools, with particular reference in the case presentations to applications in state and local health career programs.

## *Theories of Vocational Choice and Guidance*

On what theoretical basis does the guidance counselor operate? In his book, *Occupational Information*, Hoppock points out that theories of counseling, while appearing to vary, have more in common than their apparent contrasts. He states, "There appears to be either explicit or tacit agreement that occupations and people differ; that the choice of an occupation may help or hinder success and satisfaction; that choices are affected by needs and should be affected by abilities and employment opportunities; that some choices are realistic, others are fantastic, and some are in between; that many persons make several different choices before committing themselves to any one choice; that choices may con-

tinue to change throughout the working lifetime of the individual; and that a counselor may sometimes help a person to make better choices than he would make without help."

Most authorities in guidance counseling would agree on the following summary of theoretical factors, described in greater detail by Super in his book, *Vocational Development*:

1. Vocational development is an ongoing and continuous process of action and interaction between the individual and his total environment.
2. Individual differences that are related to the determination of career patterns include: psychological and physical characteristics; life experiences; the individual's personal situation; the family situation; the relation of the individual and family to the general community and its situation; environmental factors; and unanticipated and unpredictable factors. It is probable that some of these determinants are more important than others, although adequate conclusive data are not yet available.
3. While self-concepts and role-playing begin to form prior to adolescence and change with time and experience, these self-concepts are fairly stable from late adolescence through maturity.
4. While occupations require characteristic patterns of abilities, interests and personality traits, tolerances for the occupations themselves are sufficiently wide, and individual qualifications are sufficiently adaptable, so that it is possible to have a variety of suitable occupations for each individual as well as a variety of different individuals in each occupation.
5. Since each pupil is a unique personality and should be dealt with individually, students should not be channeled or pigeon-holed into occupational fields on the basis of community needs unless the individual's own needs and abilities are primarily satisfied.

Within each of the broad theoretical factors given, a number of individual components and subdivisions exist, but substantiating data are available for only some of these theoretical concepts, and even for the ones where there is some substantiation, the interaction among them is generally unknown. All agree that there is urgent need for much further research to validate the concepts of vocational choice and to determine their priority of significance.

As Super states it, "Until more comprehensive data are available on the psychological and sociological factors in vocational development, the nature of vocational development theory will necessarily be exploratory rather than systematic."

### *The Guidance Counselor*

The qualified guidance counselor is primarily a teacher, with training and experience in his teaching profession, who has done graduate work in guidance to achieve certification. He has a knowledge of human relationships and human behavior. He is skilled in testing and interviewing techniques. Because serious shortages exist in numbers of trained guidance counselors, the urgent need for their services has led to both trained and untrained persons being given responsibility for guidance counseling in the schools.

The guidance counselor works closely with teachers and administrators,

with pupils and their parents, and with community agencies, seeking to determine the essential conditions related to career choice in each individual's situation and to help the pupil develop and progress toward maturity and realistic career goals. His chief tools are:

1. Pupil inventory. In most schools this involves recording of all available data on each pupil in a cumulative folder that carries the pupil's school and related history from kindergarten through high school;

2. Information services essential to guidance. These services involve gathering, evaluation and provision of accurate and most recent information on training opportunities, scholarships, career qualifications, and working conditions in all varieties of careers.

The counselor's major activities include:

1. Individual counseling services;

2. Provision of help to students in securing part and full-time employment in their chosen occupational fields;

3. Follow-up on guidance programs, including research on successes and failures of youth in later years, to ascertain whether the guidance program helped them prepare for real life situations.

### *Guidance Counseling in Health Career Activities*

At the Atlantic City meeting, where leaders from the fields of vocational guidance and health discussed the effective use of guidance counselors in promoting health careers, and where examples of programs in states and local communities were presented, the counselors stressed the importance of the following points as practical guidelines for health people who initiate programs interpreting careers in health:

1. Inclusion of guidance counselors from the earliest stages in program planning;

2. Coordination of efforts of all community health agencies so that a unified approach is made to the schools;

3. Provision of the most recent information on health personnel needs, especially on a local basis but with some related state and national figures as well;

4. Selectivity in choice of representatives who participate in Career Days and in student interviews. The interviewer must be enthusiastic about his own profession, and the poor choice of a representative may do more harm than good;

5. Provision of scholarships, financial aid, poster contests, and other similar incentives to pupils;

6. Preparation and distribution of free brochures that are clear, simple, brief and accurate for each health career (these may supplement the National Health Council's Health Careers Guidebook);

7. Avoidance of pressure or heavy recruitment techniques. Emphasis should be on career development, based on individual abilities and talents. Facts, not colored distortions, should tell the story;

8. Advance preparation and presentation to the counselors of a planned campaign or project that may be utilized by vocational guidance counselors and subject teachers in health, science, or social sciences;

9. Preparation of a complete package of pertinent information that may be offered to the school, worked out in conjunction with the guidance counselor. Included may be names of representatives from the various

health vocations; information on speakers, agency visits, open houses; and printed materials, films, exhibits, career packets or kits. The schools may be invited to use whichever aids they wish for a long range period in terms of their own needs and at the times they may wish to use items in the package;

10. Provision of opportunities for trial work experiences, paid or voluntary, to acquaint students with the elements of different careers in health agencies, clinics, hospitals and other health services;

11. Development of community workshops to interpret the aims and objectives of guidance programs.

### *Conclusions*

There is no complete blueprint for a guidance counseling program—it must be determined locally. The success of any program of interpreting Health Careers to the youth of our nation will depend to a large extent on the relationships we in the health professions establish with guidance counselors. We must not look upon health career development as "our program", but rather as part of a total school guidance program where we may be of assistance in helping the counselor accomplish his objectives.

It is essential to remember that the guidance counselor is concerned primarily with the pupil, attempting to match his needs and abilities to vocational opportunities. The counselor becomes concerned with manpower shortages in vocational areas largely because of the impact of these shortages on his presentation of career opportunities to pupils. The most comprehensive packages of pertinent information on career areas, worked out in conjunction with guidance personnel, and presented in jointly planned programs, including work opportunities, offer maximum chances for successful career development in any vocational area.

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• *Design for Educational TV* is a 96-page report illustrated in color which the authors state is a guide in verbal and visual sketch form intended to offer comments, recommendations and suggestions to be used "in context with your particular school planning situation." Other reports available from the EFL, also at 477 Madison Ave., New York are *Ring the Alarm,* a memo to schools on fire and the management of people to meet the emergency of school fires, *The Cost of A Schoolhouse,* includes planning, building, and financing and some conclusions regarding tomorrow's schools, and *Profiles of Significant Schools,* a series of reports on some of the latest developments in school planning and design. The above publications are all available upon request without charge.

# A HEALTH OFFICER'S APPROACH TO THE CONTROL OF TUBERCULOSIS*

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Public health officials have a very real responsibility for the promotion of health and prevention of disease among those who reside within their jurisdictions. This responsibility is spelled out in many cases in state law. The degree to which state health officers or other public health officials are successful in discharging their responsibility under law is to be measured by the indices of disease and appropriateness of control measures which exist for their particular area or jurisdiction.

In most states as emerging health problems became recognized, they were reflected in developing anxiety on the part of the citizenry of the state. As this anxiety became more manifest, the legal responsibility of the state health officer from time to time became more fully defined. These definitions are to be found most clearly in the fields of environmental sanitation and of communicable disease control. It is, however, often the case that after the law has been more clearly defined because of some pressing need, the need passes and the law remains. There are on the books of many states legislation requiring that health officers follow certain specific procedures. Laws of this nature are not used frequently today, yet when they were passed, there was a great need for them. The orginal problem has fallen under the influence, not of the legal restrictions that were set up that could be imposed upon the suffering individual, but rather under the influence of new and better knowledge, new and better drugs and improved sanitation.

In witness of the success of public health working hand in hand with the practice of medicine, is the control of communicable and infectious diseases. We have the magnificent history of the decline and, in some cases, the practical disappearance of certain diseases which filled our ancestors with fear and anxiety. Many medical students graduating today have not had an opportunity to see a case of cholera, a plague of typhoid or of smallpox, and some other dread diseases of the past are not known to medical students of today. These diseases, which are now characterized as diseases of the past and which have practically vanished from our scene, are the ones that interfered with colonization, with long life, and which brought great anxiety to our ancestors who settled this country. There are certain diseases, however, which have not been brought under true control. The death rate may have fallen, but the incidence of the disease has changed little over the years. Tuberculosis is such a disease. If I may, I would like to use tuberculosis today to exemplify some of the problems which face the health officer in the discharge of his duty. Before we discuss these problems, however, I would like to point out certain characteristics—social and medical—which per-

*Presented on the Program arranged by the Committee on Tuberculosis of the American School Health Association during annual meeting of the National Tuberculosis Association, May 15, 1960, Los Angeles, California.

tain to tuberculosis. If we understand these characteristics, we will have a better understanding of the problems of the health officer.

The first of these characteristics is related to the length of illness which is associated with the disease. Because of the length of illness, tuberculosis produces a very high degree of medical indigency. It often requires long stays in sanatoriums and expensive follow-up after discharge. Few families today are able to assume this financial obligation without soon becoming medically indigent.

The second characteristic that we need to remember in relation to tuberculosis is that the diagnosis of tuberculosis was, at best, a haphazard thing until new techniques were developed. These techniques included methods for the identification of the bacillus and methods for the visualization of the lung fields. These two developments marked great progress in the techniques of tuberculosis control. During recent years there have, of course, been other developments. Certain antibiotics have come into being to which the bacillus of tuberculosis is apparently sensitive. Thoracic surgery is in many cases a great aid in the therapy of tuberculosis. Actually then, the therapy, the understanding, and the ability to cure tuberculosis have improved radically. Methods for the identification of the tuberculosis patient have apparently not changed so radically.

Let us for a moment look at the situation in which the health officer finds himself when he sets out to control tuberculosis. The first situation he must recognize is that a delay in the discovery of the disease means a greatly lengthened time of hospitalization and increased expense to the state and to the patient. The second factor of which the health officer becomes aware is that there is a false sense of security among many lay and professional groups regarding tuberculosis. Therefore, they are not motivated to fight it to the same degree that they are in reference to other diseases. The health officer, therefore, has difficulty in enlisting the full-hearted support and cooperation of the citizenry in his fight against tuberculosis. The third factor which the health officer must face is that tuberculosis is not really a socially acceptable disease. Once tuberculosis is identified in a family, the neighbors tend to shun that family because of the high degree of contagiousness which is associated with the disease and because it calls home to their minds the fact that they, too, may be victims of tuberculosis. Certainly I think we are safe in saying that tuberculosis is not as acceptable emotionally and socially as are certain other diseases. For instance, people have no hesitation in acknowledging that coronary artery disease exists within their family. They are, however, often reluctant to discuss tuberculosis if it exists within their family. This undoubtedly has bearing on the degree of uncooperativeness which the health officer finds in the average community.

Perhaps the most important factor that the health officer must come to recognize in his attempt to control tuberculosis in his jurisdiction, is that the tools currently used for such control are often inept. The most frequently used of these tools is the mass X-ray technique. Mass X-ray surveys are looked upon with some skepticism. In many areas today this skepticism is based upon two factors. The first is that the disease is usually fairly well advanced before diagnosis is made by X-ray alone. Only 75% of the lung fields are ordinarily visualized by X-ray.

The second reason is that X-rays are looked upon with some degree of doubt since they add to radiation exposure. The possibility of unnecessary and undue exposure to radiation has come greatly into the forefront recently. We must all admit that the first reason is valid only so long as no other technique has been developed. This first reason, of course, is the fact that tuberculosis often is fairly well advanced before it can be identified by X-ray. The second reason, that of undue radiation exposure, is not valid under any circumstance. I doubt that there is a health officer who would discontinue X-ray surveys simply because of a concern over excess radiation.

When a health officer is planning his program to control tuberculosis in his jurisdiction, there are certain things that he must bear in mind. The first of these is the victorious fight which has been waged by veterinarians against bovine tuberculosis. The second is that the information originally released on the meaning of a positive tuberculin skin test has been proven to be inaccurate. It was formerly thought that a positive tuberculin test indicated a high degree of resistance to further infection. This is now known to be not entirely true because it is from among tuberculin reactors that our clinical cases of tuberculosis come. A positive tuberculin test indicates that the individual is infected. A person who is known to have converted from a nonreactor to a reactor will be known to have been infected subsequent to his last negative test. Veterinarians have known this for a long time. It is through utilization of this knowledge that they were able to practically stamp out tuberculosis among cattle in these United States.

There is, of course, a slight difference in the problems faced by the veterinarian in controlling tuberculosis among cattle and that faced by the health officer in controlling tuberculosis among humans. The health officer must see that the human receives adequate therapy and recovers from his disease. This is not incumbent upon the veterinarian. It is difficult to say why the skin test, the intradermal Mantoux skin test has not been used more frequently in the control of tuberculosis. The fact remains that health officers all over these United States have for one reason or another continued until fairly recently to rely upon X-ray diagnosis and positive sputum for the identification of tuberculosis. Once the diagnosis of the disease has been made, they have, of course, mobilized all of their resources to examine all contacts in order that they might find other infected individuals. However, it has been proved again and again that if in their examination of contacts they rely upon X-ray, they must wait until the disease is clinically manifest before it can be halted.

May we digress for a moment and discuss the position which the health officer holds traditionally in each of the States. There can be little doubt but that one of the greatest factors leading to increased longevity in these United States has been the control of sanitary conditions. Environmental sanitation, potable drinking water has probably been the leading factor in doubling the life expectancy in people the last 150 years. The health officer, on the other hand, has to face the felt needs of the people which are in sharp contrast often to the public health needs of the citizens. The citizens of the health officers' jurisdictions are acutely aware of the need of new roads when such a need exists, of new schools, of other public agency improvements, but it is difficult for them to

remember that potable water has not always run into their homes and that sewage disposal systems have not always been as efficient as they are now. It is also difficult for them to remember that if there were not an ongoing control of foodstuffs, drugs and beverages, their lot would not be as secure from the health point of view as it is, as a result of their health officer's work.

The result of all of this is, of course, that the health officer frequently labors under the limitations of inadequate finances. He cannot hire the number of trained health workers that he would need adequately to protect the health of his citizenry. It is difficult for the health officer to convince legislators that the great bulk of public health is not apparent. The great bulk of the work put out by public health workers is not showy and does not sell itself to the people and so, if some agency needs to be cut in finances, very often it is the public health agency that is so cut. The average citizen has developed a set of felt needs in the field of health that have moved on beyond the original objectives of public health departments. One can list with great ease the emerging problems in public health which have in many instances not been recognized as public health problems either by the health officers or by the people themselves.

There is the problem of mental illness, the problem of old age, the problem of crippling and debilitating diseases, the problems relating to the availability of adequate medical care. These are the things of which the citizens speak today. These are the topics upon which articles are written in consumer magazines today. Ask the average citizen how he feels about tuberculosis. He will be very apt to tell you that it is a disease which he hopes he never catches, but which has practically vanished from the scene. This is perhaps an example of wishful thinking. It is also perhaps an example of failure of health education. It is the responsibility of public health officials to acquaint the public with the facts as they relate to tuberculosis today. It is, of course, his responsibility to acquaint the public with all facts relating to public health.

There is another general point which I would like to make in relation to public health activities and this is that there exists in the minds of certain public health officials the conviction that no one can work in public health who has not been trained academically in public health. Actually, this is far from the truth. In most cases public health has attempted to outrun itself, to catch up with what the citizens have begun to achieve in certain public health areas by themselves. Volunteer agencies created by the citizens have gained in stature during the past few years as an example of the ability of non-public health people to do an exemplary public health job. Certain agencies of government have been gaining in importance. These agencies have received increasing financial assistance. The reason for this is that the agencies were geared more closely to the felt needs of the people than was public health.

In contrast to these volunteer agencies and to these other agencies of government, public health has tended to remain static and in some areas to actually drop backward. Certainly if one takes into consideration the spiraling cost of living, public health has lost ground financially in many states in the Union. The blame for this loss must be laid squarely in the laps of public health workers. We cannot avoid accepting this responsibility. We have the right to this responsibility because we have

failed to recognize that we must take cognizance of the felt needs of the people as well as the basic public health requirements. We have failed to utilize the total resources of the community in the promotion of the community's health. I know health departments which are in open conflict with voluntary health organizations. This is on the face of it so self-defeating that it needs no further comment.

I must admit that the cause of tuberculosis control has suffered in many areas of our country. It has suffered because we have failed to keep alive the public's recognition of the importance of tuberculosis. It has suffered because we have allowed the public to feel that if they get a negative X-ray report, there is no danger to them from tuberculosis from that time on. We did a statistical study in Missouri which showed that a very small percentage of the total admissions to our State Tuberculosis Sanatorium were identified as a result of mobile X-ray films. Most of the cases admitted to our Sanatorium were discovered in doctors' offices, or as a result of routine hospital admission X-ray films.

Let us change the focus of our thinking for a moment and ask ourselves what would happen to a health officer who is given a skin test for cancer and refused to use it. We know what would happen. The citizens are terrified of cancer. This may or may not be good. The fact remains that the citizens reject the idea of tuberculosis and we do have a skin test for that. We have found in Missouri that it is a cheaper, simpler and certainly far more productive tuberculosis control technique than the mobile X-ray survey. We have adopted the school certification program recommended by the Committee on Tuberculosis of the American School Health Association. In the first county that we attempted to apply the skin test to all school children, better than 95% of the children were skin tested and all of the school personnel were skin tested. In one high school, 16% of the students reacted positively to the tuberculin test. We feel that we have turned the corner in recognition of tuberculosis, but give us ten years of progressive tuberculosis control in Missouri and the disease will be brought under the kind of control that we can be pround of. There is reason to believe that we can achieve this in our state. The greatest reason of all is a practical one. We do not have to wait for the person to develop infectious tuberculosis before we discover that he has been infecting the community or that he has become infected himself. We can place the positive reactor who is infected under the medical care of his own physician prior to the time he develops an open lesion or a positive sputum. Periodic examination, including X-ray inspection of the chest, by the family physician, will enable him to detect active tuberculosis before the patient is clinically ill or infectious. Money and time will be saved because of early diagnosis as the length of treatment and hospitalization will be markedly reduced and the patient will be able to return to normal activity in a shorter time.

Secondly, we know that everyone who turns up with a positive skin test for tuberculosis contracted the bacillus from someone else. It is our job as public health workers to find out who that someone is, bring him to adequate care and assist in rendering him whole and well again.

There is no question in my mind that public health today is at the crossroads. We have forgotten in many areas of our nation how to sell ourselves and the techniques of public health to the people. If we can

serve the people, the people will support us. It is unimportant where we, as public health officials, begin this rewinning of public confidence. One of the most logical places to begin is in the control of a disease which is costly, dangerous, and which is amenable to adequate control. I, therefore, urge deep and serious consideration by every public health official of the advantages to his community, to himself, to his profession in the enlightened approach to the control of tuberculosis. Let him discover a child who is infected with tuberculosis. Let him discover the one who has infected that child. Let him see to it that both of them receive adequate and constructive care for their disease and he will win friends out of all proportion to the number that he will win from the enforcement tactics which, unfortunately, many public health officials have fallen into. You cannot close a restaurant, a nursing home, or a hospital without certainly letting the public know why the institution has been closed. Let him balance his necessary, but friend-losing programs, with friend-winning programs. Let him serve his people as he discharges his obligations. Let him be an enforcement officer if the law requires that of him, but let him also be a man of service among his people.

In Missouri we are convinced that the wise and appropriate attack on tuberculosis as a disease is through the technique of skin testing with adequate follow-up. We are equally convinced that this is a service to the people and that as we truly serve the people, the people will accept and support us.

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## TWENTY-FIFTH ANNUAL REPORT OF COMMITTEE ON TUBERCULOSIS AMERICAN SCHOOL HEALTH ASSOCIATION

J. ARTHUR MYERS, M.D., *Chairman*

Your committee arranged a program which was presented on Sunday evening, May 15, 1960 in Los Angeles during the annual meeting of the National Tuberculosis Association. The following persons presented papers: Mr. Thomas F. Mulrooney, Program and Rehabilitation Director, Minnesota Tuberculosis and Health Association, St. Paul, Minnesota; Sydney Jacobs, M.D., Associate Professor of Medical Tulane University, New Orleans, Louisiana; Mrs. Edith Backs, R.N., Secretary, Washington County Tuberculosis Association, Nashville, Illinois; and H. M. Hardwicke, M.D., Deputy Director, Division of Health of Missouri, Jefferson City, Missouri.

The main project of the committee for 1960 consisted of promoting certification of schools on the basis of tuberculosis work in progress in close cooperation with state and large municipal tuberculosis associations. The stages engaged in this project and a brief sketch of their activities are:

*Arizona* reported that during the school year, a total of 3,908 tuberculin tests were administered with 1,197 reactors. Seven Class A and

[1]Presented before the Council, October 31, 1960. San Francisco, California.

seven Class B certificates were awarded, making a total of 935 schools certified since the project began.

The Arizona State Board of Education adopted the policy of accepting negative tuberculin tests in lieu of chest X-ray films for all school personnel. The test must be repeated every other year and reactors must have X-ray films of their chests.

In *Chicago and Suburban Cook County*, for the fifth consecutive school year, tuberculin testing was conducted in the public school system. From September 1959 through April, 1960, the intracutaneous test was administered in three selected high and eleven elementary schools. Original tuberculin (OT) was used in a dose of 0.1 milligrams. The total enrollment in the 14 schools was 16,969 of whom 13,099 (77.2 per cent) had the test completed.

The percentage of participation for the individual high schools ranged from 66.9 to 83.5, and for the elementary schools from 54 to 85.3 per cent.

Fourteen per cent (1,832) of those tested reacted with induration of 5 millimeters in diameter or over. For the three high schools, the percentage of reactors ranged from 11.0 to 25.7 per cent and for the elementary schools, from 0 to 25.3 percent. The overall reaction was 14 per cent for the school year 1959–60; whereas in 13 schools selected in 1958–59, it was 18 per cent.

In *Georgia*, there was an increase in the activity in the tuberculin testing program during the past year. Five schools were awarded Class A certificates. Indications are that there will be considerable expansion of tuberculin testing in Georgia in the future. A tuberculin testing guide was in preparation.

In *Illinois*, 30 schools were certified making a total of 230 in that state.

*Iowa* reported that during the five years the certification of schools project has been in effect, 42 counties have participated, in 57 tuberculin testing programs leading to school certification. From 1585 schools, 209,000 students were tested of whom 5,500 (216 per cent) reacted. More than 13,600 personnel members were tested and 2,558 (18.8 per cent) reacted. Approximately 13,000 family members and relatives of these students and school personnel tuberculin reactors were included in the testing program, of whom approximately 2,800 (21.6 per cent) reacted.

Of the 1,585 schools 1,248, approximately 89 per cent, received certificates. Of those not certified, two out of three failed because of nonparticipation of one or more personnel members.

In *Kansas*, the Certification of Schools Project was adopted by the State Tuberculosis and Health Association.

Mr. W. W. Wilmore, Executive Director, Kansas Tuberculosis and Health Association said, "We are looking forward to doing some tuberculin testing in accordance with our certification plan very soon. There is another thought that the certification program would be related to our Kansas Centennial in 1961, and thereby, give some initial impetus."

In *Minnesota*, the first certificate awarded in Minnesota for tuberculosis control work in schools was on October 15, 1945. At the close of the school year 1960, 3,908 certificates had been issued, an average of 260 per year. However, in the school year ending 1960, 398 certificates were issued as compared to 400 during the entire year of 1959. Through the

five years from January 1, 1955 through December 31, 1959, the number of tuberculin tests reported to the Minnesota Department of Health has increased from 80,904 in 1955 to 207,916 in 1959. This tabulation represents reports from public health nurses employed in counties and schools, and from others carrying out tuberculin testing in communities and industry. Now included in this report are the hundreds of tests accomplished in hospitals and the offices of private physicians.

In *Missouri*, many weeks were spent on organization and education of professional workers and the public. Numerous meetings were held with the state and county tuberculosis associations, officials of the State Health Department, the State Medical Association, the State Osteopathic Association, parent-teacher associations, and finally the general public.

Newton County, with a population of 29,000 and with one of the highest death rates from tuberculosis of any county in Missouri, was selected for the pilot project.

The educational campaign conducted in the schools for personnel and children has probably never been excelled. When the testing began, 800 volunteers were ready.

The testing was finally scheduled for the 48 schools to be conducted over a four-week period. There were 6,532 school children, of whom 6,256 (95 per cent) had tests completed and 187 (3 per cent) reacted.

All of the 443 adult school employees were tested and 30 per cent reacted. Therefore, every school in Newton County qualified for certification. Thirty-three received Class A certificates for 95 per cent of student and 100 per cent of school employee participation. Sixteen of these schools had 100 per cent participation of students. The remaining 15 schools received Class B certificates for 80 to 94 per cent student and 100 per cent school employee participation. The reactors were promptly sent to the offices of physicians for X-ray film inspection and work began immediately on attempts to trace the sources of their infections. Results of the early follow-up studies revealed six cases of previously undiagnosed tuberculosis and 15 suspected cases for differential diagnosis.

In summary, Dr. C. W. Meinershagen, Missouri State Division of Health, said of the Newton County Project:

1. "School Certification is a stimulus to a high proportion of students and adults participating in a skin testing program.
2. It can be utilized in other counties to provide better tuberculosis control.
3. It has value as a case finding procedure.
4. It's a stimulus to more intensive work by health departments in tuberculosis.
5. It should be used only where follow-up and subsequent testing is assured.
6. We should work more closely with the physicians to be certain they understand the program, far too many children reactors were X-rayed and their families not tested.
7. This is an exacting, time consuming and continuing program for areas interested in a more complete control of tuberculosis.
8. School epidemics or threats of them which everyone seems to fear can be prevented and controlled.
9. The physicians are interested in the program and will cooperate.

10. This project can be written up in such form as to provide a complete guide to other schools in counties who want to participate in such a program."

The *St. Louis* subcommittee reported that during the year 1959–60, 56,184 tuberculin tests were administered among school children from kindergarten through high school. There were 1,711 (3 per cent) reactors. X-ray film inspection was made of the chests of the reactor children and their adult contacts.

Since this program began in St. Louis, 309,023 tuberculin tests among school children have been completed. The percentage of reactors has gradually decreased. Fifty cases of clinical tuberculosis have been found, 18 among the tuberculin reactor children and 32 among their contacts.

*Montana*, reported that in the 1959–60 school year, Mantoux tests were offered to 538 schools. Of this number, 271 Class A and 44 Class B certificates were issued. A total of 53,594 (92 per cent) students and school personnel received the test with 1,792 (3.34 per cent) reactors were found. Of these 1,489 (83 per cent) completed further physical examination with chest X-ray films. More than 15 active, clinical cases of tuberculosis were reported as a result of the school testings with an additional 20 suspects.

One of the finest brochures yet issued in a Certification of Schools Project appeared in Montana during the past school year.

In *New Mexico* a plan is in progress to make the tuberculin test compulsory for all first grade children as they enter school followed by seeking sources of infection of those who react. This should be an excellent opening wedge for testing in all grades with the necessary additional procedures leading to Certification of Schools.

In *North Dakota* 262 schools were certified which involved the testing of 20,100 children of whom 255 (1.3 per cent) reacted. There were 1,443 personnel members tested of whom 226 (15.7 per cent) reacted.

Since the School Certification program began in 1954 and extending through the school year 1959–60, 130,408 children have been tested with tuberculin, of whom 2,113 (1.6 per cent) reacted. Among the personnel, 9,115 were tested of whom 1,666 (18.39 per cent) reacted. Certificates had been awarded to 2,533 schools.

### *Tuberculosis Eradication is our Goal*

Each of the 14 members of the committee on tuberculosis was invited to participate in the work of the American School Health Association because of expertness and experience in one or more phases of tuberculosis work.

No member has ever failed to respond to any request for the betterment of the committee work. It is compliment to past and present members that no physician has declined invitation to its membership.

It has been important throughout the years to have thoroughly informed students of tuberculosis formulating and recommending the tuberculosis program of the American School Health Association. These recommendations have guided us on a forward couse so that tangential excursions have been largely avoided.

Recommendations of these students of all aspects of tuberculosis have never been more important than now. It is difficult for many persons in

health work with little understanding of the fundamentals of this disease to appreciate the necessity of proceeding to the eradication goal to prevent tuberculosis from regaining its former destructiveness. Such persons refer to the fact that tuberculosis has been reduced from first place to a much lower level as the cause of death in this country. They also refer to the decreased morbidity and infection attack rates. Students of tuberculosis in this country take great pride in these accomplishments but their goal is eradication of all tubercle bacilli. An unfortunate recommendation is being made in many places regarding tuberculin testing in schools. It is said that the percentage of tuberculin reactors among children is so low that continued testing is economically unsound and epidemiologically unnecessary. Attention is called to the small per cent of advanced cases of tuberculosis found among tuberculin reactors in the schools. Therefore, it is contended that "certainly it would appear sounder to use the funds and personnel time for more productive activities at present."

These objections and others have been given most careful consideration by the tuberculosis students of your committee who are familiar with the disease tuberculosis from the time tubercle bacilli invade an individual's body through all the destruction it is capable of performing, even to death. They know that every person who develops clinical tuberculosis at one time had no evidence of the disease but a tuberculin reaction. That reaction meant the presence of at least primary lesions harboring tubercle bacilli. They know that only such persons, that is, those who react to tuberculin, fall ill from tuberculosis. They know that the morbidity rate runs parallel with the infection rate. Therefore, among children and young adults with low infection rate, there is correspondingly low morbidity. Whereas among older individuals with high percentage infected, tuberculosis continues to take a high toll. Indeed, older people many of whom are reactors to tuberculin, are providing the great bulk of morbidity and mortality—in some places up to 95 per cent in this country.

The objective of your committee has always been eradication. It has never been to stop at 1 or 2 per cent of school children who react to tuberculin, but when there is no reactor in any school. Until this is accomplished, there will continue to be a tuberculosis problem in schools.

This has been one of the most fruitful periods in the 26 years of existence of this committee. Many schools were issued certificates for the first time and much praise for the project was received from persons who directed and accomplished the work. Certification brought responses from both children and personnel which probably could not have been accomplished in any other way. At the end of the last school year, thousands of certificates were displayed on walls of schools in several states. No longer will the possibility exist for personnel members or even older children disseminating tubercle bacilli. Many adults with contagious tuberculosis have been detected by examinining contacts of children found to react to tuberculin. Wherever schools have been certified, the educational value to children, personnel and indeed entire communities has been immense.

Launching of the certification project in Missouri was a momentous occasion. It is doubtful that a more intensive, extensive and effective

tuberculosis education campaign was ever initiated and completed anywhere in the world than that in Newton County.

In our early years, the activities of the committee were given much consideration and support by the National Tuberculosis Association Staff. In fact, some of our reports and articles were published in the Bulletin of the National Association. After our committee adopted the Certification of Schools Project in cooperation with State Tuberculosis Associations, its contacts were mainly with those organizations. We assumed that the National Association's Staff was in close contact with its component state organizations regarding this project.

Nothing had been brought directly to the Committee on Tuberculosis by the Staff of the National Association to the effect that it did not approve Certification of Schools. However, on October 7, 1959, a letter was written by Miss Charlotte Leach, Consultant in Health Education, with a memorandum by Mr. Taylor and copies of the National Tuberculosis Association "Staff Thinking" regarding School Certification for tuberculosis control enclosed. This letter revealed that there was much misunderstanding about the Certification of Schools Program.

In Miss Leach's letter of March 7, 1960, it was proposed that the staff members of the National Association meet with members of our Committee at the time of the annual meeting of the National Tuberculosis Association in Los Angeles in the spring of 1960. This meeting was held Monday evening May 16, at the Statler Hotel. From the National Tuberculosis Association Staff were Miss Charlotte Leach, Dr. Floyd Feldmann, Miss Helen Ostwald, Miss Jean South, Mr. Alex Woiceshen, Associate Program Development Division, Mr. Glen Taylor and Mrs. Olive Billyeald, Assistant Executive Director of the National Conference of Tuberculosis Workers.

Members of our committee present were Dr. David T. Smith, Duke University, Dr. Sydney Jacobs, New Orleans, Dr. Max Durfee, Oberlin College and myself.

A committee member stated that if the National Association Staff had suggestions for improving the Certification of Schools Program so as to meet with the approval of both groups and thus hasten the eradication of tuberculosis from the schools of this country, it would be glad to receive them.

On August 31, Mr. Woiceshen, Associate, Program Development Division of the National Tuberculosis Association, suggested slight modifications in the qualifications for school certification. Copies were sent to our Committee members for suggestions. This resulted in approval by the members. Therefore, the qualifications will be exactly as outlined in Mr. Woiceshen's last letter. If the staff of the National Tuberculosis Association decides actively to support and promote the Certification of Schools Project, the placing of a certificate on the wall of every school in America could be materially hastened with prompt and marked advance toward the tuberculosis eradication goal.

Along with rejoicing over past accomplishments, our committee members are aware of their enormous responsibility. It has been estimated that the number of children from five to 17 years will increase from 45,000,000 this year to 53,000,000 by 1970. The personnel employed in various capacities and in contact with the children is well over 1,000,000.

Methods for freeing children and personnel of our schools from infectious and contagious tuberculosis are available. To see that they are operating in all schools is one of the responsibilities of the American School Health Association.

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## MILESTONE FOR NEW YORK STATE SCHOOL NURSE-TEACHERS

School nurse-teaching services in New York State reached a significant point this year when the numbers employed by boards of education exceeded 2000 for the first time. It is worthy of note that the number has doubled in the past ten years. The rapidity of growth is evidence that boards of education, school administrators, parents and the public at large are keenly aware of the value of the health program in the school.

In 1920, there were less than 200 School Nurse-Teachers employed by boards of education in New York State. The growth in numbers was steady but comparatively moderate in pace for the next thirty years until in 1950, the 1000 mark was reached. The growth during the past ten years reflects, in part, the 43.5% increase in elementary and secondary school enrollments. In addition, school health services have been provided for the first time to over 500 non-public schools by local boards of education. This means that the total number of children receiving school health services has increased proportionately at a greater rate than the number of School Nurse-Teachers.

An interesting comparison may be made between growth in numbers of School-Nurse Teachers in New York State and the nation as a whole. In 1951 the number of nurses employed by boards of education in the United States was 6,088. In 1955 the number had increased to 7,807; in 1957 to 9,378; and in 1960 the number was 11,060 or slightly less than double the number employed in 1951. This increase is also phenomenal in relation to the growth in members of nurses employed in other fields of nursing.

More significant than the increase in numbers is the growth in the scope of the school health program. For several decades the school nurse functioned primarily as a "detector". At first the prime target of her sleuthing activities was communicable disease. As advancements in the field of medicine began to minimize this hazard to children, her efforts were focused on detection of physical conditions which could handicap a child's school progress. The school nurse still has functions related to both these aspects of health, but we have begun to realize that the school is in a unique position to assume leadership in a more positive way—the promotion of health through education.

As these concepts have developed, the work of the school nurse has assumed new dimensions. We can no longer measure her activities in numbers of services rendered to pupils. We must use the same yardstick used to evaluate other educational endeavors—an informed pupil moving toward intelligent self-direction. The role of the school nurse is, therefore, one of a consultant, a counselor and an educator. It is this combination of skills which enables the school nurse to make an unparalleled contribution to the health and education of youth.

# AMERICAN SCHOOL HEALTH ASSOCIATION SCHOOL NURSING COMMITTEE

## Report of 1960 Activities

DOROTHY TIPPLE, R.N., *Chairman*

The School Nursing Committee has had a number of continuing activities during 1960 which were reviewed and discussed at the convention in San Francisco. Committee meetings during the conference were also used to plan for future projects for our very active Committee.

The sub-committee on Academic Preparation for School Nurses, under the chairmanship of Mrs. Helen Watson, has combined the activities of two previous sub-committees, one on Certification and the other on B.S. Degree Programs in Nursing. During the past year the new sub-committee has served in an advisory capacity in relation to the School Health Project currently being undertaken by the National League for Nursing. The School Nursing Committee has had an active part in stimulating this study which is being directed by Dr. Elizabeth Stobo of Teachers College, Columbia University. The purpose of the project is to develop guidelines for curriculum content for the preparation of the professional nurse who will work in the school setting. The project will run until June 30, 1961. It is being carried out under a grant from the United States Children's Bureau. The design for the study was established during the early months of 1960. On October 28th an interdisciplinary committee met in San Francisco to review the recently published statement of functions for school nurses prepared by the American Nurses' Association. Following this session, a committee of nurse educators met on December 5–7 to consider the knowledges, skills and abilities needed to carry out the functions.. A questionnaire has now been prepared to send out to the participating colleges and universities. This questionnaire is designed to determine which of the knowledges, skills and abilities can be developed in the baccalaureate degree program and which part of the preparation should be on the graduate level. The completed questionnaires will be reviewed and the findings compiled. It is anticipated that the information provided will be helpful in establishing guidelines on the educational preparation of school nurses.

Miss Irma Fricke has served as chairman of a sub-committee to study the new ANA statement entitled *Functions and Qualifications for School Nurses*. This statement has recently been developed by the School Nurses' Branch, Public Health Nurses' Section, American Nurses' Association. It was accepted by that organization at the biennial convention held in Miami Beach in May, 1960. Since that time it has been reviewed by Miss Fricke's sub-committee and was presented to the School Nursing Committee for approval at the San Francisco meeting. Miss Fricke reported that the members of her sub-committee had expressed the opinion that the ANA statement should not replace the American School Health Association statement entitled *Policies and Practices for School Nurses* since the two publications were developed for different purposes. It was the opinion of sub-committee members, however, that the ANA

statement was a most commendable piece of work and contained no philosophy or recommendations in conflict with our statement on policies and practices. It was the consensus of the School Nursing Committee that endorsement of the ANA statement by the American School Health Association would strengthen its use by the ANA and the nursing profession, and would likewise strengthen its use as one of the tools being used by the NLN Research Project. Therefore, the School Nursing Committee recommended to the Governing Council that the American School Health Association endorse the ANA statement entitled *Functions and Qualifications for School Nurses* and notify the ANA to that effect.

A third active sub-committee, under the chairmanship of Mrs. Pauline Carroll, has been engaged in compiling reports of surveys, projects and studies which have been carried on by school nurses. Summaries were prepared on nineteen such projects and a report given at the San Francisco conference.

In 1959 at Atlantic City our committee structure was studied and an attempt was made to reorganize it along more functional lines. It was agreed that the present chairman, the immediate past chairman, and the chairman of sub-committees should serve as a "steering committee" to facilitate committee activities. Secondly, it was agreed that the various activities should continue to be carried out by sub-committees and that the chairman of each sub-committee should select the members of her group. It was further recommended that a nurse representative should be sought in each state to serve as a liaison between the chairman of the School Nursing Committee and the ASHA members in that state in order to establish better channels of communication. This structure has proved quite effective on the whole, although we are finding it very difficult to obtain a member of ASHA in each state who is willing to act in a liaison capacity.

There was excellent participation in the committee meetings held at San Francisco and serious discussion related to continuing and future projects. It was recommended that the following sub-committees continue their activities:

1. Sub-committee on Academic Preparation.
   This sub-committee should continue to work with local problems regarding academic preparation, should work in an advisory capacity to the NLN Research Project until the completion of that project in June, 1961 and should then initiate whatever action is appropriate to implement the findings of this project.
2. Sub-committee on Functions and Qualifications.
   This sub-committee should function in a stand-by capacity and should do whatever is necessary to implement the ANA statement on *Functions and Qualifications for School Nurses.*
3. Sub-committee on Projects and Studies.
   This sub-committee should continue to function by compiling reports of surveys, projects and studies which have been carried on by school nurses. It should explore the possibilities for publication of briefs of these reports and also select and develop appropriate reports for publication without briefing.

It was further recommended that the following sub-committees should be established:

1. A sub-committee to study the problem of desirable nurse-pupil ratio, in conjunction with the ANA research project on this problem.
   This particular problem was discussed by the School Nursing Committee at the 1959 meeting in Atlantic City. It was recognized that research would be necessary and it was suggested that we refer the matter to the ANA for their consideration. The project has now been referred to the Special Committee on Research, Public Health Nurses' Section, American Nurses Association. We anticipate that a study will soon begin. The function of our sub-committee will be to serve in an advisory capacity while the project is in progress and then be ready to implement it as necessary upon completion by the ANA.
2. A sub-committee to explore the various written communication media used in the school health program, to study and evaluate such materials, and to devise some guidelines for their development. Miss Virginia Thayer, Judd Road, Oriskany, New York will serve as chairman of this sub-committee.
3. A sub-committee to study some of the problems related to supervision and administration in school nursing and to develop some guides to implement the section on supervision and administration in the ANA statement *Functions and Qualifications for School* Nurses.
4. A sub-committee to study the role of the school nurse in counseling.

It is obvious that each of these sub-committee projects is an ambitious one and the outcome of each project will be in direct proportion to the interest and participation of school nurses. We urge all school nurse members of the ASHA to contribute to the activities of these sub-committees. If you are particularly interested in any one of the projects, please advise me. It is anticipated that we will be able to announce the names of all sub-committee chairmen in the near future and a brief statement of their project plans.

Mark your calendar now for the 1961 meeting in Detroit the week of November 12th. We are tentatively planning an all day session for school nurses on Saturday, November 11th. Plan now to come to Detroit on Friday, November 10th and be there to work with us on Saturday.

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• Norvin C. Kiefer, M.D., chief medical director of Equitable Life Assurance Society of the U.S., has been appointed chairman of the 1962 National Health Forum, it was announced by James E. Perkins, M.D., president of the National Health Council which sponsors the annual health forums. The Forum, the subject of which is "Accident Prevention and Emergency Care," will be held in Cleveland, Ohio, the week of March 19, 1962.

The 1962 Forum will bring together leaders from the health field, industry, organized labor, farming, science, safety engineering, insurance, education and government to discuss the chronic problems of accident prevention and emergency care and what can and must be done about them.

# COMMITTEES* OF THE AMERICAN SCHOOL HEALTH ASSOCIATION

## January 1961

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*Personnel of the various Study Committees will appear in a subsequent issue of the Journal. Editor.

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Director of the Project is Merl I. Whorlow, former Health Education Consultant, Michigan Department of Health, Lansing, Michigan. Whorlow's background includes experience in both health and education. He is a former teacher, Junior High School Principal and Superintendent of Schools in Montana. He has served as Health Education Consultant with the Indiana State Board of Health, Cincinnati, Ohio, Department of Health and Iowa State University.

The objectives of the project, according to Mr. Whorlow are:

1. To help improve present health education activities in selected school districts of Los Angeles County.
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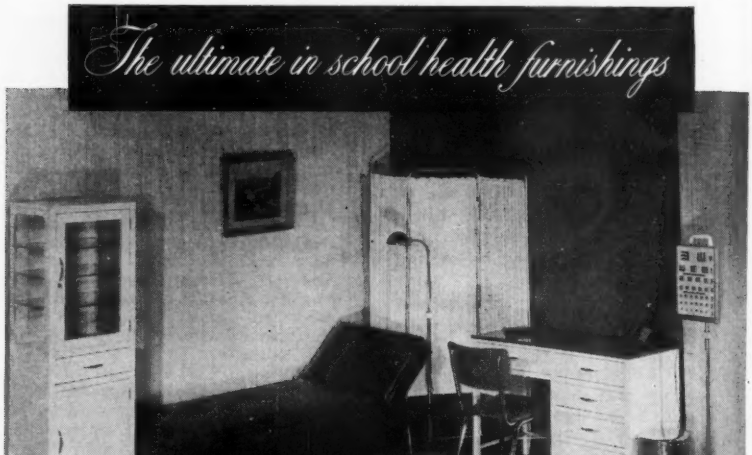


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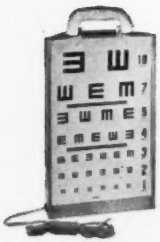

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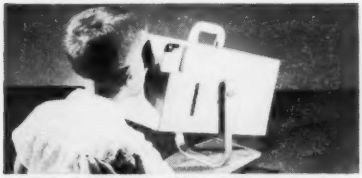

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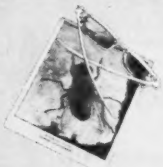

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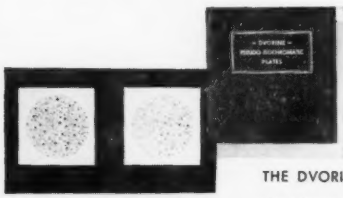

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